

Applications of Performance Feedback: Consultation in the Home

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Abstract

Many School Psychologist and Educational Consultants have used Bergan's Behavioral Consultation model (Bergan, 1977) in public school and residential settings with significant success (Witt, Noell, LaFleur & Mortenson, 1997). Performance feedback (Noell, Duhon, Gatti, & Connell, 2002) has been used to strengthen the behavioral consultation model by monitoring intervention implementation and providing procedures to increase intervention fidelity. The present study examines the effects of modified performance feedback procedures by investigating its use in home settings. Results indicate the performance feedback alone was not effective in increasing all components of intervention implementation. However, subsequent telephone follow-up calls did increase intervention implementation. Results are discussed highlighting modifications and limitations to performance feedback in the home.

Keywords: performance feedback, school consultation, distance consultation, home settings, fidelity

School psychology arguably began in the 1880s in the University of Pennsylvania laboratory of Lightner Witmer (Noell & Witt, 1996). Through the next 100 years, school psychology grew larger in scope, becoming recognized within the American Psychological Association (APA) and founding its own organization, the National Association of School Psychologists in 1969.

As the need for school psychologist grew, so did the need for an effective, efficient service delivery model. Bergan's, Behavioral Consultation (BC) model became the widely accepted, indirect service delivery model used in public school settings. Interestingly, the model has undergone few changes since its unification in the late 1970s (see Bergan, 1977). Noell & Witt (1996) argued that the model has undergone few changes because it was primarily a model to deliver scientifically derived interventions and therefore the empirical evidence was specific to intervention, not to consultation. Thus, the emphasis was on the client (i.e., student) and not the consultee (i.e., staff). To be sure, this emphasis places the locus of control for behavior change (i.e., response-to-intervention) within the student, not the student's environment. As such, Witt, Noell, LaFleur & Mortenson (1997) began a line of investigation that focused BC directly on consultee behavior and considered the consultee as the instrument for behavior change in the client. With the addition of Performance Feedback, Witt et. al. (1997) added intervention implementation fidelity to the BC model and shifted the locus of control for behavior change, to the student's environment.

Performance Feedback (PFB) has been described as "Information provided to individuals about the quantity or quality of their past performance" (Prue & Fairbank, 1981). Witt et. al. (1997) modified PFB procedures derived from Organizational Psychology to school settings and intervention implementation fidelity of evidence-based interventions. In that study, the authors developed academic interventions that included an end-of-intervention assessments that functioned as evidence that the interventions were completed (i.e., permanent products). A task analysis with checklist was included in the intervention packet. The teacher was asked to check off which intervention components were completed each day the intervention was implemented. The task list and the end-of-intervention assessment were indications of intervention fidelity adherence. These two permanent products were then used to graph the number of steps completed by the total number of steps in the prescribed intervention (task analysis checklist) and graph the student end-of-intervention assessment data. Then, the authors met with the teachers on a daily basis to present the graphs, provided positive statements when the interventions were completed, and discuss how implementation fidelity could be achieved when

implementation adherence was low. Follow-up studies investigated the use of PFB when the intervention used peer tutors (Noell, Witt, LaFleur, Mortenson, Ranier, & LeVelle, 1997), when PFB was delivered on a weekly basis (Mortenson and Witt, 1998), with behavioral interventions (Noell, Duhon, Gatti, & Connell, 2002) in residential settings (Jones, Wickstrom & Friman, 1997) and with direct-care staff (Reedy, Luiselli & Thibedeau, 2001), in comparison to other consultation models (Noell, et., al., 2005), within a response-to-intervention pre-referral meeting (Duhon et. al. 2009), and in autistic support classrooms (Pellecciah et. al., 2010). However, investigating the use of PFB in home settings where the barriers to implementing the procedures derived from the studies above are unknown.

Program fidelity is greatly needed in home settings because many parents/guardians are confronted with significant concurrent responsibilities and demands and stay-at-home caregivers have far less support than school-based staff. Therefore, consultants working in the home encounter the same difficulties regarding intervention evaluation, as do those consultants working in schools and residential settings with the added difficulty of getting to remote locations on an infrequent basis. The present study sought to evaluate whether PFB could be modified to a home setting where the frequency of the visits is far less than recommended in the performance feedback literature. That is, performance feedback has a prescribed set of procedures that includes daily visits to start the intervention which are gradually leaned to weekly, then monthly visits. The present study sought to evaluate whether a leaner schedule of visits would maintain intervention fidelity in the home, and if not, would the use of follow-up phone contacts support program fidelity.

Method

Participants and Settings

The consultee was the grandmother and legal guardian of the two clients. She was a Caucasian female, married and in her late fifties. The guardian did not have any college education, was unemployed and collecting disability insurance to cover the cost of caring for her two grandchildren. The clients were a 10 year-old male and a 12 year-old female. Both children were Caucasian and both were the grandchildren of the consultee. Both children were receiving special education support through their local school district. The local school district provided both children with in-school and in-home behavioral consultation services. Katrina was receiving support for emotional and behavioral concerns. Roland was receiving learning disability and emotional and behavioral support services. All the participants lived in a small two-bedroom, ranch style house in a rural New England town. The consultee had previously demonstrated an inability to consistently collect treatment implementation data.

Measures

Treatment fidelity. The primary outcome measure for this study was the extent to which the guardian implemented the treatment plan as it was designed. The treatment plan included reminding the children of the house rules and rewards, monitoring target behaviors and providing rewards contingent upon attaining a goal. Completing the treatment plan produced permanent products in the form of a house rule chart with smile faces denoting the points each child earned that day and an intervention checklist. House rules were: 1) use nice words, 2) accept “no” from adults, 3) arms and feet are for helping, and 4) take care of yourself and your belongings. Points earned varied from zero (i.e., did not follow any rules), to eight (followed all four rules for the day). The guardian was asked to circle or color in the smile face that denoted the number of points earned and save the weekly chart until the next consultation meeting. Additionally, a checklist was provided to remind the guardian of the intervention steps. The checklist required the guardian to check off four tasks: 1) read the rules to the children in the morning, 2) remind the children if they follow the rules, they earn smile faces and treats, 3) remind them again when they come home from school and 4) count the points at the end of the day and provide the earned treats. The

percentage of plan implementation was calculated as the number of completed steps per day, divided by the number of steps in the intervention (e.g., 4 out of 4 steps equaled 100% fidelity).

Consultation and Intervention Procedures

Baseline. The initial (i.e., baseline) consultation process conformed to the BC model of consultation (Bergan & Kratochwill, 1990). The Problem Identification interview (PII) focused on identification of the children's target concerns, alternative acceptable behaviors, environmental events surrounding the problem behaviors, and other general background information relevant to the current concerns.

Next was the Problem Analysis Interview (PAI). During this meeting the consultant and guardian discussed the current treatment plan (developed by the consultant formerly assigned to this case). It was decided that we would first determine if the plan was ineffective before deciding to abandon the intervention. Once the consultant and guardian reached agreement regarding the intervention, the consultant prepared and gathered all of the necessary materials for implementation (e.g., smiley face charts & intervention checklists).

The consultant then monitored intervention implementation approximately every two weeks in accordance with the local school district contract for the number of in-home hours provided and as part of the consultants home-consultation rotations. Meetings consisted of a one-hour visit that was structured as a Plan Evaluation Interview (PEI). This consisted of a brief interview in which the consultant asked about the extent to which the plan was implemented the previous weeks, the extent to which the children's behavior was improving, and if the guardian had any questions or concerns.

Intervention. Performance feedback was initiated when the intervention implementation reached 0% for two consecutive home visits in order to determine if a new case consultant (the first author) could increase intervention fidelity using traditional behavioral consultation. Performance feedback was then scheduled for the next home consultation. The PFB consisted of weekly scheduled meetings with the guardian, reviewing the intervention permanent products, graphing the caregiver and child behavior, and problem-solving barriers to intervention implementation and ongoing data collection. The consultant then provided positive feedback regarding steps that were completed and identified treatment steps that were omitted or implemented incorrectly. The consultant and guardian then discussed the importance of any missed steps; problem solved for future implementation, and scheduled the next home visit (approximately one week away). PFB was scheduled for weekly meetings due to the constraints consistent with fee for service agencies (e.g., agreed upon service hours and monthly billing). Phone call follow-up. Phone call follow-up was scheduled to occur once implementation again fell to 0% during the PFB condition. Phone calls consisted of contacting the consultee approximately one time per week following PFB. The phone call consisted of the consultant asking the consultee if the data collection sheets (i.e., hours rule chart and checklist) were being filled out on a daily basis. The consultant provided positive feedback if data collection occurred on a daily basis and offered suggestions regarding increased implementation if data collection was not occurring. Phone calls lasted between 10 and 30 minutes.

Results

Figure 1 illustrates checklist completion by the guardian. Baseline data for plan implementation fell to 0% within 10 days after meeting with the guardian to discuss plan implementation. Home visits occurred approximately once per two weeks until the PFB could be increased to once per week

(approximately one month). The average steps completed during baseline was 12.5 %. Performance feedback was started on the 38th day of intervention. The graphs of the preceding baseline data, PFB problem-solving meeting and goal setting for the next week increased data collection the following day, but intervention implementation then fell to 0% across the next two weeks, including after one additional PFB meeting. The average number of steps completed during PFB was 7.3%. Follow-up phone calls were then initiated and program implementation varied from 0% to 100% across the next nine sessions. Intervention implementation average 55% of steps completed during this phase.

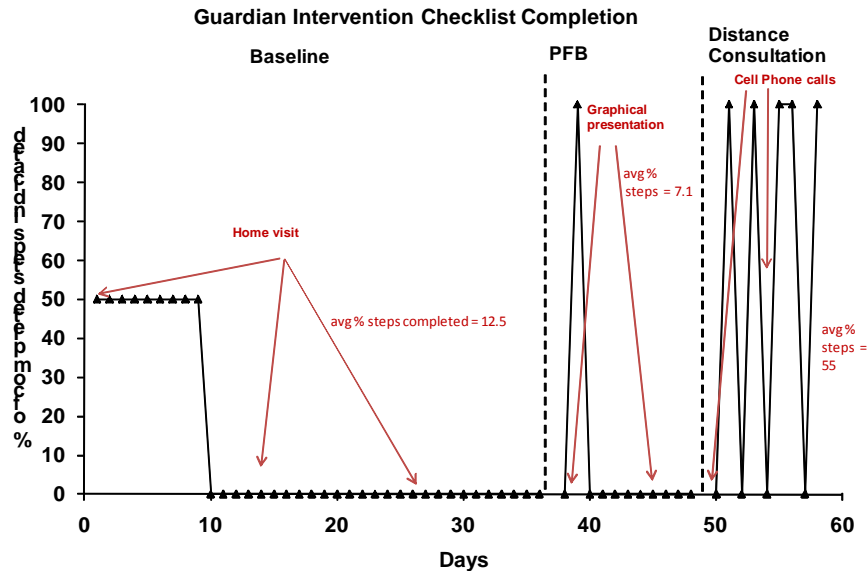


Figure 1. Guardian checklist completion demonstrating the percentage of steps in the intervention reportedly completed.

Figure 2 illustrates intervention outcome data for Roland. The data indicates that the Roland earned an average of 3.5 points per day with a decreasing trend across the baseline phase. Once PFB began, the data trend shows some stability, however the average number of points per day decreased to 2.9. With the addition of phone call follow-up, the average number of points earned per day increased to 4.5 with an increasing trend.

Figure 2, Next Page!

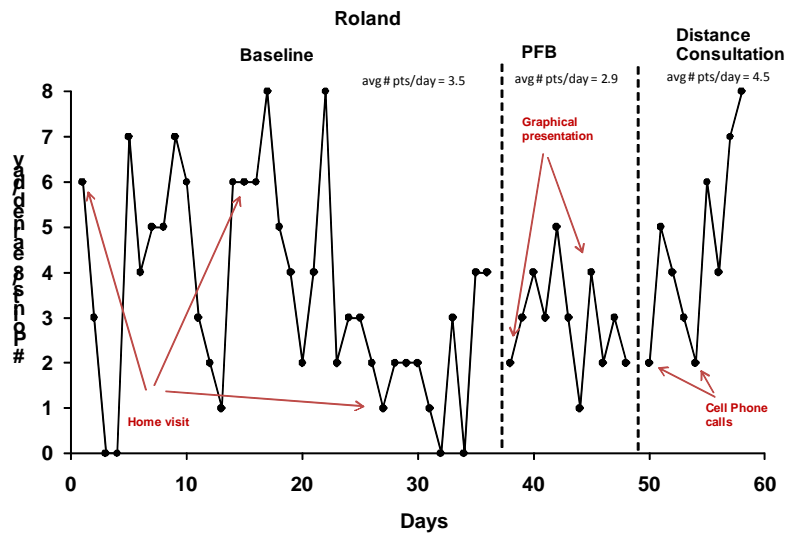


Figure 2. The number of points Roland earned per day during the baseline, modified performance feedback and distance consultation conditions.

Figure 3 illustrates the intervention outcome data for Katrina. Like Roland's trend, the number of points decreased across the baseline condition and was highly variable. The average number of points earned per day was 4 during this condition. The PFB phase data illustrates a slight average increase in the number of points per day to 4.5. The phone call phase data remained steady at an average of 4.5 points per day.

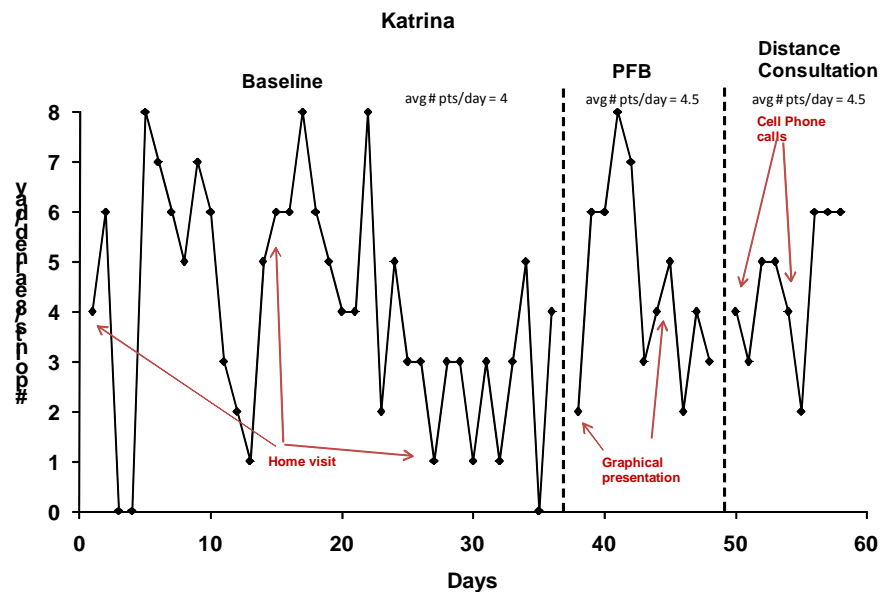


Figure 3. The number of points Katrina earned per day during the baseline, modified performance feedback and distance consultation conditions.

Discussion

The present study sought to extend the PFB literature (Jones et. al., 1997; Noell et. al., 1997; Witt et. al., 1997; Mortenson & Witt, 1998; Reedy et. al. 2001; Noell et. al., 2002; Noell, et., al., 2005) by investigating the effectiveness of modified PFB procedures in home-based consultation settings. Results indicate that the modified PFB procedures increased intervention fidelity in part. The checklist completion data shows no increase (other than one day) during the PFB condition. However, the guardian began implementing the intervention with greater consistency as demonstrated by the increasing earned point trends for both Roland and Katrina during the PFB condition. Perhaps the data does not directly indicate that the intervention was being implemented, and of course could suggest that the children were following the rules more closely; however, the increasing trend in points earned per day immediately followed decreasing trends during the baseline condition with both children. Furthermore, it would be impossible to determine the degree to which the children were following the rules without direct observation, thus the points earned per day is the only indication of treatment effectiveness. The phone call follow meetings data supports this conclusion. That is, as phone call meetings began, the degree of program implantation adherence also increased from 12.5% in baseline to 55% during the phone call phase. And, the average number of points earned trend stabilized and remained at the highest during this phase for both children (4.5 points per day for both children). The data thus suggest at the very least, that the intervention was moderately effective in increasing pro-social behavior in the home when implemented with modest fidelity.

The results demonstrate that PFB produces greater intervention implementation fidelity than no PFB and that phone call follow-ups may be needed if the intervention requires permanent products of client and consultee behavior. Therefore, PFB is more effective than BC alone, but additional contact is needed when PFB deviates from the procedures described in Noell et. al. (2005). Additionally, the results that weekly PFB visits can sustain intervention implementation and therefore demonstrates the efficiency needed when working within the constraints of fee-for-service agencies.

The lack of a scientific design prevents conclusive statements regarding efficiency and effectiveness of PFB in the home. Future studies would employ scientific designs (e.g., multiple baseline designs across individuals) to demonstrate the effectiveness of the model in the home.

References

- Bergan, J.R. (1977). *Behavioral Consultation*. Columbus, OH. Merrill.
- Bergan, J. R. & Kratochwill, T. R. (1990). *Behavioral Consultation and Therapy*. New York, Plenum.
- Duhon, G.J., Mesmer, E.M., Gregerson, L., & Witt, J.C. (2009). Effects of public during RTI team meetings on teacher implementation integrity and student academic performance. *Journal of School Psychology, 47*, 19-37.
- Jones, K. M., Wickstrom, K. F., and Friman, P. C. (1997). The effects of observational feedback on treatment fidelity in school-based behavioral consultation. *School Psychology Quarterly, 12*, 316-326.

- Mortenson, B.P., and Witt, J.C. (1998). The use of weekly performance feedback to increase teacher implementation of a pre-referral academic intervention. *School Psychology Review*, 27, 613-627.
- Noell, G. H., Duhon, G. J., Gatti, S. L., & Connell, J. E. (2002). Consultation, follow-up and implementation of behavior management interventions in general education. *School Psychology Review*, 31, 217-234.
- Noell, G. H., & Witt, J.C. (1996). A critical re-evaluation of five fundamental assumptions underlying behavioral consultation. *School Psychology Quarterly*, 11, 189-203.
- Noell, G. H., Witt, J.C., LaFleur, L.H., Mortenson, B.P., Ranier, D. D., & LeVelle, J. (2000). Increasing intervention implementation in general education following consultation: A comparison of two follow-up strategies. *Journal of Applied Behavior Analysis*, 33, 271-284.
- Noell, G., Witt, J., Slider, N., Connell, J., Gatti, L., Williams, K., et al. (2005). Treatment implementation following behavioral consultation in schools: A comparison of three follow-up strategies. *School Psychology Review*, 34, 87-106.
- Pellecchia, M., Connell, J. E., (2010). Group Performance Feedback: Consultation to Increase Classroom Team Data Collection. (in review).
- Prue, D. M., and Fairbank, J. A. (1981). Performance feedback in organization behavior management. *Journal of Organizational Behavior Management*, 3, 1-16.
- Reedy, P., Luiselli, J.k., and Thibadeau, S. (2001). Improving staff performance in a residential child-care setting using computer-assisted feedback. *Child & Family Therapy*, 23, 43-51.
- Witt, J.C., Noell, G. H., LaFleur, L.H., and Mortenson, B.P. (1997). Teacher use of interventions in general education settings: Measurement and analysis of the independent variable. *Journal Of Applied Behavior Analysis*, 33, 693-696.

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